

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for producing β -form tris-(2,3-epoxypropyl)-isocyanurate crystals containing from 2 to 15 wt% of α -form tris-(2,3-epoxypropyl)-isocyanurate in the interior of the crystals, comprising:

(A) reacting cyanuric acid with epichlorohydrin to form an addition product of cyanuric acid and epichlorohydrin, and dehydrochlorinating said product to obtain a reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate,

(B) removing epichlorohydrin from said reaction solution, and dissolving tris-(2,3-epoxypropyl)-isocyanurate in an organic solvent, wherein said solvent is acetonitrile, toluene, dioxane or dimethylformamide, to form a solution,

(C) gradually cooling the solution of (B) at a cooling rate ~~within~~ of at most 20°C/hr for crystallization, and filtering to obtain crystals, and

(D) washing and drying said crystals, wherein said crystals have a remaining epichlorohydrin content of at most 100 ppm.

Claim 2 (Currently Amended): The process according to Claim 1, wherein (A) comprises reacting: (a) 1 mol of cyanuric acid, (b) from 5 to 180 mols of epichlorohydrin and (c) a catalyst of from 0.001 to 0.1 mol of at least one compound selected from the group consisting of a tertiary amine, a quaternary ammonium salt, a quaternary ammonium base, a ~~tri-substituted~~ tri-substituted phosphine and a quaternary phosphonium salt, to obtain said reaction solution, and adding from 2 to 6 mols of an alkali metal hydroxide or an alkali metal alcoholate to said reaction solution for dehydrochlorination, and removing the resulting alkali

metal salt to obtain said reaction solution containing ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate.

Claim 3 (Canceled).

Claim 4 (Currently Amended): The process according to Claim 1, wherein ultrasonic waves are applied to said solution of (B), when ~~in said~~ gradually cooling said solution in (C).

Claim 5 (Currently Amended): The process according to Claim 1, wherein said washing in (D) is carried out by using a solvent capable of providing a solubility of at least 0.5 g/100 g_s at 20°C₁ to α form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate and a solubility of less than 0.5 g/100 g_s at 20°C₁ to β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate, in an amount of from 0.5 to 10 times by weight relative to the β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals.

Claim 6 (Previously Presented): The process according to Claim 1, wherein the average particle size of said crystals obtained in (C) is from 20 to 500 μm , and said drying in (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 120 to 140°C.

Claim 7 (Previously Presented): The process according to Claim 1, wherein the average particle size of said crystals obtained in (C) is from 10 to 20 μm , and said drying in (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 40 to 120°C.

Claim 8 (Currently Amended): A process for producing β -form tris-(2,3-epoxypropyl)-isocyanurate crystals containing from 2 to 15 wt% of α -form tris-(2,3-epoxypropyl)-isocyanurate in the interior of the crystals, comprising:

(A) reacting cyanuric acid with epichlorohydrin to form an addition product of cyanuric acid and epichlorohydrin, and dehydrochlorinating said product to obtain a reaction solution containing tris-(2,3-epoxypropyl)-isocyanurate,

(B) removing epichlorohydrin from said reaction solution, and dissolving tris-(2,3-epoxypropyl)-isocyanurate in an organic solvent, wherein said solvent is acetonitrile, toluene, dioxane or dimethylformamide, to form a solution,

(C') adding seed crystals to the solution of (B) at a temperature ~~lower by~~ from 5 to 20°C lower than the temperature at which said solution forms a saturated solution, and gradually ~~said~~ cooling said solution at a cooling rate ~~within~~ of at most 20°C/hr for crystallization, and filtering to obtain crystals, and

(D) washing and drying said crystals, wherein said crystals have a remaining epichlorohydrin content of at most 100 ppm.

Claim 9 (Currently Amended): The process according to Claim 8, wherein (A) comprises reacting: (a) 1 mol of cyanuric acid, (b) from 5 to 180 mols of epichlorohydrin and (c) a catalyst of from 0.001 to 0.1 mol of at least one compound selected from the group consisting of a tertiary amine, a quaternary ammonium salt, a quaternary ammonium base, a ~~tri-substituted~~ tri-substituted phosphine and a quaternary phosphonium salt, to obtain a reaction solution, and adding from 2 to 6 mols of an alkali metal hydroxide or an alkali metal alcoholate to said reaction solution for dehydrochlorination, and removing the resulting alkali

metal salt to obtain said reaction solution containing ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate.

Claim 10 (Canceled).

Claim 11 (Currently Amended): The process according to Claim 8, wherein said addition of said seed crystals in (C') satisfies the following formulae (1) and (2):

$$1 \times 10^{10} \geq T \geq 1 \times 10^2 \quad (1)$$

$$T = 1.4 \times 10^{12} (m/(MxD^3)) \quad (2)$$

wherein T is the number of said seed crystals added per the weight of ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate in said reaction solution (number/g), m is the weight (g) of said seed crystals added, D is the average particle size of said seed crystals which is from 2 to 300 μm , and M is the weight (g) of ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate in the reaction solution.

Claim 12 (Currently Amended) The process according to Claim 8, wherein said seed crystals added in (C') are β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals, or a mixture of β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals and α form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals.

Claim 13 (Currently Amended): The process according to Claim 8, wherein ultrasonic waves are applied to said solution of (B), when in said gradually cooling said solution in (C').

Claim 14 (Currently Amended): The process according to Claim 8, wherein said washing in (D) is carried out by using a solvent capable of providing a solubility of at least 0.5 g/100 g_s at 20°C₁ to α form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate and a solubility of less than 0.5 g/100 g_s at 20°C₁ to β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate, in an amount of from 0.5 to 10 times by weight relative to the β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals.

Claim 15 (Previously Presented): The process according to Claim 8, wherein the average particle size of said crystals obtained in (C') is from 20 to 500 μm , and said drying in (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 120 to 140°C.

Claim 16 (Previously Presented): The process according to Claim 8, wherein the average particle size of said crystals obtained in (C') is from 10 to 20 μm , and said drying in (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 40 to 120°C.

Claim 17 (Currently Amended): A process for producing β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals containing from 2 to 15 wt% of α -form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate in the interior of the crystals, comprising:

(A) reacting cyanuric acid with epichlorohydrin to form an addition product of cyanuric acid and epichlorohydrin, and dehydrochlorinating said product to obtain a reaction solution containing ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate,

(B) removing epichlorohydrin from said reaction solution, and dissolving ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate in a solvent, wherein said solvent is acetonitrile, toluene, dioxane or dimethylformamide, to form a solution,

(C") heating the solution of (B) to a temperature of at least the temperature at which said solution forms a saturated solution, thereafter cooling said solution to a temperature ~~lower by~~ from 5 to 20°C lower than the temperature at which said solution forms a saturated solution, and adding seed crystals thereto, and then gradually cooling said solution at a cooling rate ~~within~~ of at most 20°C/hr for crystallization and filtering to obtain crystals, and

(D) washing and drying said crystals, wherein said crystals have a remaining epichlorohydrin content of at most 100 ppm.

Claim 18 (Currently Amended): The process according to Claim 17, wherein (A) comprises reacting: (a) 1 mol of cyanuric acid, (b) from 5 to 180 mols of epichlorohydrin and (c) a catalyst of from 0.001 to 0.1 mol of at least one compound selected from the group consisting of a tertiary amine, a quaternary ammonium salt, a quaternary ammonium base, a ~~tri-substituted~~ tri-substituted phosphine and a quaternary phosphonium salt, to obtain a reaction solution, and adding from 2 to 6 mols of an alkali metal hydroxide or an alkali metal alcoholate to said reaction solution for dehydrochlorination, and then removing the resulting alkali metal salt to obtain said reaction solution containing ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate.

Claim 19 (Canceled).

Claim 20 (Currently Amended): The process according to Claim 17, wherein said addition of said seed crystals in (C'') satisfies the following formulae (1) and (2):

$$1 \times 10^{10} \geq T \geq 1 \times 10^2 \quad (1)$$

$$T = 1.4 \times 10^{12} (m/(M \times D^3)) \quad (2)$$

wherein T is the number of said seed crystals added per the weight of ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate in said reaction solution (number/g), m is the weight (g) of said seed crystals added, D is the average particle size of seed crystals which is from 2 to 300 μm , and M is the weight (g) of ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate in the reaction solution.

Claim 21 (Currently Amended): The process according to Claim 17, wherein said seed crystals added in (C'') are β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals, or a mixture of β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals and α -form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals.

Claim 22 (Currently Amended): The process according to Claim 17, wherein ultrasonic waves are applied to said solution of (B), in the process of gradually cooling said solution in (C'').

Claim 23 (Currently Amended): The process according to Claim 17, wherein said washing in (D) is carried out by using a solvent capable of providing a solubility of at least 0.5 g/100 g_s at 20°C₁ to α -form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate and a solubility of less than 0.5 g/100 g_s at 20°C₁ to β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate, in an amount of from 0.5 to

10 times by weight relative to the β form ~~tris-(2,3-epoxypropyl)-isocyanurate~~ tris-(2,3-epoxypropyl)-isocyanurate crystals.

Claim 24 (Previously Presented): The process according to Claim 17, wherein the average particle size of said crystals obtained in (C'') is from 20 to 500 μm , and said drying in (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 120 to 140°C.

Claim 25 (Previously Presented): The process according to Claim 17, wherein the average particle size of said crystals obtained in (C'') is from 10 to 20 μm , and said drying in (D) is carried out under atmospheric pressure or under reduced pressure in a gas stream at a temperature of from 40 to 120°C.

Claim 26 (Previously Presented): The process according to Claim 1, wherein said removing epichlorohydrin is carried out by coating a film of said reaction solution on a substrate and heating.

Claim 27 (Previously Presented): The process according to Claim 26, wherein said heating is from 100 to 165°C.

Claim 28 (Previously Presented): The process according to Claim 26, wherein said removing epichlorohydrin is carried out under reduced pressure.

Claim 29 (Previously Presented): The process according to Claim 26, wherein said film has a thickness of from 30 to 500 micron.

Claims 30-35 (Canceled).

Claim 36 (Previously Presented): The process according to Claim 8, wherein said removing epichlorohydrin is carried out by coating a film of said reaction solution on a substrate and heating.

Claim 37 (Previously Presented): The process according to Claim 36, wherein said heating is from 100 to 165°C.

Claim 38 (Previously Presented): The process according to Claim 36, wherein said removing epichlorohydrin is carried out under reduced pressure.

Claim 39 (Previously Presented): The process according to Claim 36, wherein said film has a thickness of from 30 to 500 micron.

Claim 40 (Previously Presented): The process according to Claim 17, wherein said removing epichlorohydrin is carried out by coating a film of said reaction solution on a substrate and heating.

Claim 41 (Previously Presented): The process according to Claim 40, wherein said heating is from 100 to 165°C.

Claim 42 (Previously Presented): The process according to Claim 40, wherein said removing epichlorohydrin is carried out under reduced pressure.

Claim 43 (Previously Presented): The process according to Claim 40, wherein said film has a thickness of from 30 to 500 micron.

Claim 44 (New): The process according to Claim 1, wherein in step (B), the tris-(2,3-epoxypropyl)-isocyanurate is dissolved in acetonitrile, dioxane or dimethylformamide.

Claim 45 (New): The process according to Claim 8, wherein in step (B), the tris-(2,3-epoxypropyl)-isocyanurate is dissolved in acetonitrile, dioxane or dimethylformamide.

Claim 46 (New): The process according to Claim 17, wherein in step (B), the tris-(2,3-epoxypropyl)-isocyanurate is dissolved in acetonitrile, dioxane or dimethylformamide.